REMARKS

The present Response is believed to be fully responsive to the Office Action mailed August 20, 2008. Claims 1-2, and 4-20 are pending in the application and are under rejection. Dependent Claim 3 was cancelled without prejudice by prior response. Reconsideration of the application is requested in view of the following remarks.

Although the Attorney for the Assignee believes the present application is in condition for allowance, if the Examiner determines otherwise, the Attorney for the Assignee requests a telephonic examiner's interview prior to the mailing of another Office Action.

Rejections Under 35 U.S.C. § 103

In the Non-final Office Action, Claims 1-2, and 4-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,134,338 to Solberg et al. (herein after "*Solberg*") in view of U.S. Patent Publication No. 2002/0077787 to Rappaport et al. (hereinafter "*Rappaport*"). Specifically, the Office Action contends that *Solberg* discloses a method for providing actual scale information of a digital image. The Office Action recognizes that *Solberg* fails to teach or suggest embedding the scale information in a header of a digital raster image; however, the Office Action contends that *Rappaport* teaches this element.

To establish a case of *prima facie* obviousness, the combination of prior art references must teach or suggest all the claim limitations of the claimed invention (See *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991) and MPEP § 2142). All of the words in a claim must be considered in judging the patentability of that claim against the prior art (See *In re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970) and MPEP § 2143.03). Additionally, when forming an obviousness rejection, the cited art references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention (See *Hodosh v.Block Drug Co., Inc.*, 786 F.2d 1136, 1143 (Fed. Cir. 1986) and MPEP § 2141). The combination of references, viewed by themselves and not in retrospect, must suggest doing what the applicant has done (See *In re Shaffer*, 108 USPQ 326 (CCPA 1956)).

It is respectfully asserted that the Non-final Office Action fails to establish a *prima facie*

case of obviousness because neither *Solberg* nor *Rappaport*, either taken alone or in combination, teach or suggest each and every element of independent Claims 1, 6, 10, and 15. Specifically, neither *Solberg* nor *Rappaport* teach or suggest "embedding the scale information in a header of the digital raster image" and "storing the digitized raster image and the embedded scale information as a single file".

As a result of embedding scale information in a header of a digitized raster file, a single file may be stored for a drawing that is available for subsequent access by a processor. Many conventional document archival techniques, including those utilized by most CAD systems, such as *Solberg*, depend on the association in a database of digital images and one or more external files containing information about the digital images (e.g., scale information for the digital images). When external files are utilized, the stored data can become disconnected or disassociated from the digital image in a wide variety of common ways, such as, network failure, database failure, human error, decommissioning of systems, etc. Additionally, inaccuracies may occur if the data in one or more of the external files is altered or corrupted. By embedding scale information in a header of a digitized raster file to create a single file for an image, data for the image may be accurately retrieved from a single source. In this regard, safeguards can be provided for critical scale information associated with a digitized drawing. This scale information can be transformed into usable true scale measurement information upon a subsequent access of the digitized raster file. For example, a user can draw a line or shape on a rendering of the image and a true scale measurement of the length of the line or area of the shape may be calculated utilizing the embedded scale information.

As recognized by the Office Action, *Solberg* does not disclose, teach, or suggest "embedding the scale information in a header of the digital raster image" and "storing the digitized raster image and the embedded scale information as a single file". In marked contrast, *Solberg* relates to a system that determines scale information for an intermediary raster image and then utilizes the scale information to construct a CAD vector based image. *Solberg* determines the scale information by either reading alphanumeric text representing scale information from the face of a raster image (See *Solberg* at Col. 16, line 36 – Col. 17, line 16; Col. 17, lines 55-59) or, alternatively, via a user prompt for the scale information (See *Solberg* at

Col. 25, lines 30-33 and FIG. 6). Any information associated with the created CAD image, including the determined scale information, is stored in the main body of the CAD file itself or in a CAD library file (See, for example, *Solberg*, at Col. 57, lines 10-15). The scale information is not stored or embedded in a header of a digital raster image. Furthermore, the embedded scale information and the digital raster image are not stored as a single file.

The raster images discussed in *Solberg* are simply utilized as intermediate files during the creation of a CAD file (See *Solberg* at Col. 22, lines 63-65). There is no teaching or suggestion in *Solberg* of storing a scale of a raster file in a header of the raster file. Instead, it appears that any scales of raster files in *Solberg* are simply used to construct a CAD file. Accordingly, if the scale information is saved, it is saved in the main body of the CAD file itself or in a CAD library file. Scales in *Solberg*, therefore, are likely set and stored for the generated CAD file rather than for the intermediate raster images. In fact, because *Solberg* uses the raster images only as intermediate files, *Solberg* is not concerned with preserving the original raster image data. Thus, there is no need to save the raster images in *Solberg*, and there is certainly no need to embed scale information for the raster images in a header of the raster images.

The Office Action recognizes that *Solberg* fails to teach or suggest embedding scale information in a header of a digital raster image and storing the digital raster image and embedded scale information as a single file. However, the Office Action contends that *Rappaport* teaches these features. Although *Rappaport* relates to a system and method that allows measurement readings to be associated with one or more textual strings or graphical icons that facilitate understanding of the measurement readings (See *Rappaport* at paragraphs [0070] and [0092]), *Rappoport* does not teach or suggest embedding scale information in a header of a raster file. *Rappaport* makes no mention of scale information, much less the embedding of scale information in a header of a raster file.

In *Rappaport*, a set of textual strings and/or graphical icons may be loaded onto a computer platform or stored by a user in association with a field measurement study (See *Rappaport* at paragraph [0044]). The user may then select one or more of the textual strings and/or graphical icons to associate with each measurement reading that is taken in order to provide contextual meaning to the measurements (See *Rappaport* at paragraph [0044]). The sets

of textual strings and/or graphical icons are stored in computer files (See *Rappaport* at paragraph [0044]). However, there is no teaching or suggestion in *Rappaport* of embedding scale information in the header of a digital raster file. First, there is no teaching or suggestion in *Rappaport* of the computer files being digital raster files. Second, there is no teaching or suggestion in *Rappaport* of scale information being included anywhere in the computer files or otherwise being associated with the computer files. Although the computer files of *Rappaport* include a header section, the header section only provides information on the file itself, such as the creator, filename and date when the file was created (See *Rappaport* at paragraph [0095]). The embedding of generic information, such as a filename, in a header is different than the embedding of specific scale information in a header. The textual stings of *Rappaport* and other non-generic information are stored in the body of the file rather than in the header (See *Rappaport* at paragraph [0095]). Thus, there is no teaching or suggestion in *Rappaport* of embedding scale information in the header of a digital raster file. Moreover, because *Rappaport* does not consider scale information, it is respectfully submitted that *Rappaport* is non-analogous to the claimed invention and improperly relied upon by the Office Action.

The Office Action cites to FIGS. 3 and 5 and paragraphs [0085], [0092], [0097], and [0107] of *Rappaport* to support its proposition of *Rappaport* teaching the embedding of scale information in a header of a digital raster image. As discussed above, FIG. 3 and its associated text does not discuss the embedding of scale information in a header of a digital raster image. In marked contrast, only information on the file itself (e.g., file name, date of creation, file type, etc.) is stored in the header section 301 of the file shown in FIG. 3 (See *Rappaport* at FIG. 3 and paragraph [0095]). Similarly, FIG. 5 does not teach or suggest embedding scale information in a header of a digital raster image but only the inclusion of information about the file itself in the header section of a computer file (See *Rappaport* at FIG. 5 and paragraph [0101]). Paragraph [0085] of *Rappaport* references FIG. 5 as a computer file containing stored measurement readings and associated textual strings and/or graphical icons; however, Paragraph [0085] does not teach or suggest the embedding of scale information in the header of the computer file. In fact, it is unlikely that the header of *Rappaport* would even permit scale information to be embedded or otherwise recorded therein because the scale data must often be stored in specific

data fields that have a specific format to accommodate the storage of the scale data. *Rappaport* does not teach or suggest the use of any specific or non-generic data fields in its header.

Paragraph [0092] of *Rappaport* is set forth below:

> [0092] The present invention contemplates a system and method that provides the ability to measure, for example, the performance of communication networks, and the ability to associate each measurement reading with one or more textual strings and/or graphical icons. The present invention uses the textual strings and/or graphical icons to provide a user of the invention additional insight into the general location, network status, object status, or environment status at the instance the measurement reading was recorded. Such information may also be used at a later time, when the user later visualizes or compares the field measurements with past or future measurements. Given an image (e.g., raster image such as a bitmap, JPEG, TIFF, GIF, TGA, PCX, etc.), map, CAD file, or 2D or 3D model of a physical environment or any other information that constitutes a computer representation of a physical environment (all of which will hereafter be referred to as an "environmental model"), the present invention uses the textual strings and/or graphical icons associated with each measurement reading to provide an indication of the meaning of the measurement, as well as an approximate position or location designation within the computer model at which the measurement reading was recorded. The environmental model may also represent a photo or image of a room or a vehicle, for example.

Paragraph [0092] discusses the ability to associate measurement readings with textual strings and/or graphical icons. There is no teaching or suggestion of associating scale information with the measurement readings. Additionally, there is no teaching or suggestion in the paragraph of

embedding scale information in the header of a digital raster file. Paragraph [0092] does relate to a system that can later associate the textual strings and/or graphical icons with the measurements in an image representing an environmental model, such as an environmental model of a location at which the measurement readings were recorded. However, there is no teaching or suggestion of associating scale information with the measurement readings in a rendering of the environmental model. Additionally, there is no teaching or suggestion of embedding the scale information in a header of a digital raster file. Thus, paragraph [0092], either taken alone or in combination with *Solberg*, does not teach or suggest every element of independent Claims 1, 6, 10, and 15.

Paragraph [0097] of *Rappaport* relates to graphical icons that may be utilized by the system of *Rappaport* and associated with a measurement reading. There is no teaching or suggestion in *Rappaport* of the graphical icons including scale information associated with a measurement reading. Furthermore, there is no teaching or suggestion in *Rappaport* of embedding scale information in the header of a digital raster file.

Paragraph [0107] of *Rappaport* relates to a process for automatically associating textual strings and/or graphical icons with measurement readings based on the value of a reading, the type of measurement reading, or the source of a measurement reading. For example, a particular textual string may be associated with each measurement reading that falls within a specified range. However, there is no teaching or suggestion in paragraph [0107] of associating scale information with the measurement readings or embedding scale information in the header of a digital raster file. In fact, there seems to be no reason to associate scale information with the measurement readings of *Rappaport*. In *Rappaport*, when an environmental model is rendered, the actual measurement readings are overlaid onto the rendering of the model (See *Rappaport* at FIGS. 10 and 11 and the associated text). The textual strings and graphical icons may be utilized to determine a position at which the measurement reading is overlaid onto the rendering (See *Rappaport* at paragraphs [0092] and [0124]). Because the measurement readings are the actual measurement readings, no scale information is necessary. Accordingly, *Rappaport* does not teach or suggest associating scale information with measurement readings. Thus, there is no teaching or suggestion in *Rappaport* of embedding scale information in the header of a digital

raster file, as recited by independent Claims 1, 6, 10, and 15.

Measurement call outs are often found on architectural drawings (See Specification at FIG. 5 and associated text). For example, the true scale length of a wall may be included in an architectural drawing. In conventional architectural systems, a user can read these included measurements when viewing a digital image of the drawing; however, the user is unable to accurately determine a measurement (e.g., a length or area) of an image element whose dimension is not specifically recorded on the image without performing manual calculations (See Specification at paragraph [0007] - [0010]). Although a pixel length or pixel area of an image element in a digital image may be determined, accurate true scale measurements of the image element cannot be determined. This problem is solved by embodiments of the claimed invention.

As a result of embedding scale information in a header of a digitized raster file, a single file may be stored for a drawing that is available for subsequent access. The embedded scale information may be utilized to provide accurate true scale measurement information upon a subsequent access of the digitized raster file. For example, a rendering of the digitized raster file may be made and drawing input may be received in the rendered digitized raster file. True scale measurements of the drawing input may be determined based on the embedded scale information. As one example, an architectural drawing may be converted to a digitized raster file and scale information may be embedded in a header of the digitized raster file. Once the digitized raster file is rendered, a user may draw a line or shape in the rendered architectural drawing, and true scale measurements for the drawn line or shape (e.g., distance or area) may be determined utilizing the embedded scale information. Because the scale information is embedded in a header of the raster file, there is no need to access another file, such as, a library file, central database file, etc., to retrieve the scale information. In other words, embedding the scale information in the header of the raster file facilitates safeguarding of the information. Thus, true scale measurements may be determined even if another file containing the scale information has been corrupted or is unavailable for any reason, such as, a loss of network connectivity.

Additionally, it is respectfully submitted that embodiments of the claimed inventions

satisfy a long standing need in the art. Prior to the development of the claimed inventions, there was a need in the art for electronic architectural rendering systems and methods that facilitated the calculation of true scale measurements associated with user input drawn on the rendered digital raster image. Notwithstanding the disclosures of *Solberg* and *Rappaport*, no solution was developed to address this need prior to the solution provided by the claimed inventions. Therefore, it is respectfully submitted that such a solution would not be obvious in light of *Solberg* and *Rappaport* absent impermissible hindsight reconstruction.

Moreover, as a result of the solution provided by certain embodiments of the invention, the Applicants have achieved substantial commercial success. As noted by the press release appended to this Response, development of the claimed inventions has led to a partnership with IBM to market products throughout the world. This commercial success must be considered as a secondary consideration in a patentability determination (See *Graham v. John Deere Co.*, 383 U.S. 1, 148 (1966)).

Certain embodiments of the claimed invention can provide novel solutions that embed scale information in the header of a digital raster image that can be utilized later to provide true scale measurements of drawing input associated with the digital raster image. *Solberg*, other CAD systems, and *Rappaport* all teach away from the one time embedding of scale information into the header of a digital raster image. Accordingly, it is respectfully asserted that neither *Solberg* nor *Rappaport*, either taken alone or in combination, teach or suggest each and every element of the independent claims.

For at least the reasons stated above, it is respectfully asserted that independent Claims 1, 6, 10, and 15 are allowable over the combination of *Solberg* and *Rappaport*. Additionally, because Claims 2, 4-5, 7-9, 11-14, and 16-20 ultimately depend from one of independent Claims 1, 6, 10, or 15, those claims are likewise allowable as a matter of law as depending from an allowable base claim, notwithstanding their independent recitation of patentable features.

Patentability of Certain Dependent Claims

Dependent Claims 19 and 20 were added by the Response filed on June 5, 2008. These

claims were rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of *Solberg* and *Rappaport*. However, as set forth below, it is respectfully submitted that each of these claims recites patentable subject matter.

Patentability of Dependent Claim 19

Dependent Claim 19 recites that "the received drawing input is a shape, and wherein calculating a true scale measurement of the drawn shape comprises calculating the area of the drawn shape." As set forth in the previous Amendment and Response, it is respectfully submitted that *Solberg* does not teach or suggest receiving drawing input comprising a line or a shape and calculating the true scale measurement of the line or shape. More specifically, it is respectfully asserted that *Solberg* does not teach or suggest receiving drawing input of a shape and calculating the area of the drawn shape. In marked contrast to dependent Claim 19, *Solberg* relates to a system that only mentions the creation of lines and curves, (i.e., vectors) during the generation of a CAD drawing (See *Solberg* at Col. 26, lines 26-28; Col. 32, lines 42-45; Col. 34, lines 27-49). There is no teaching or suggestion in *Solberg* of receiving drawing input of a shape and calculating a true scale area of the drawn shape.

Additionally, there is no teaching or suggestion in *Rappaport* of receiving drawing input of a shape and calculating a true scale area of the drawn shape. Although *Rappaport* allows a user to associate text and images with selected regions of a rendered image (See *Rappaport* at FIGS. 10-11 and associated text), *Rappaport* does not teach or suggest the calculation of a true scale area of a drawn shape. Moreover, *Rappaport* does not teach or suggest the calculation of a true scale area of a drawn shape based at least in part on scale information that is embedded in the header of a digital raster image.

Moreover, dependent Claim 19 ultimately depends from amended independent Claim 1 for which arguments of patentability have been provided above. For at least these reasons, it is respectfully asserted that dependent Claim 19 is allowable over *Solberg* and *Rappaport*, either taken alone or in combination.

Patentability of Dependent Claim 20

Dependent Claim 20 recites that "receiving drawing input comprises receiving drawing input in the rendered digital image." In certain embodiments of the claimed invention, a user may draw a line or shape in a rendered digital raster image, and a true scale measurement of the drawn line or shape may be determined.

As set forth in the previous Amendment and Response, it is respectfully submitted that *Solberg* does not teach or suggest receiving drawing input in the rendered digital image comprising a line or a shape and calculating the true scale measurement of the line or shape. It appears that *Solberg* relates to a system that only mentions the receipt of drawing input in association with defining a library symbol (See *Solberg* at Col. 29, line 66 – Col. 30, line 5). Drawing a symbol that is saved in a symbol library is not the same as drawing a line or a shape in a rendered digital raster image and, therefore, does not anticipate dependent Claim 20.

Additionally, *Rappaport* does not teach or suggest receiving drawing input in a rendered digital image and calculating a true scale measurement for the drawing input. Although *Rappaport* relates to a system that can overlay measurement readings and graphical icons on a displayed image, the overlaid information is information that is imported from another file (See *Rappaport* at FIGS. 10-11 and associated text). The overlaid information in *Rappaport* is not a line or a shape that is drawn in a rendered digital image by a user. Furthermore, *Rappaport* does not teach or suggest calculating a true scale measurement for any of the overlaid information based at least in part on scale information that is embedded in a header of a digital raster image. In fact, because the measurement readings that are overlaid in an image of *Rappaport* are the actual measurement readings that have been taken be a user (See *Rappaport* at paragraph [0124]), there is no need to perform any calculations on the data to determine true scale measurements.

Moreover, dependent Claim 20 ultimately depends from amended independent Claim 1 for which arguments of patentability have been provided above. For at least these reasons, it is respectfully asserted that dependent Claim 20 is allowable over *Solberg*.

CONCLUSION

It is believed that each matter raised by the Non-final Office Action has been addressed. Allowance of the claims is respectfully solicited. It is not believed that extensions of time or fees for addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR §1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 19-5029.

If there are any issues which can be resolved by telephone conference or an Examiner's Amendment, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

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